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N. S. DAVIS, M.D., EDITOR.

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ARTICLE XXXIII.

TREATMENT OF STRICTURE OF THE URETHRA BY FORCIBLE RUPTURE.

Before proceeding to speak of the treatment of stricture of the urethra, permit me to call your attention to a few points of the surgical anatomy of this canal, which it is very important for every surgeon to understand, before he should attempt to introduce instruments into it. When the penis is lifted up—but not distended—a catheter has only to pass, at most, 7½ inches, when it will enter the bladder.

The urethra is divided into three portions—the prostatic, membranous, and spongy. The extent of the prostatic portion being from 6 to 10 lines in length; of the membranous, 6 to 8 lines; while that of the spongy portion is subject to the greatest variation, and is the only part of the urethra in which the different positions,—and extension—make a change in the direction of the canal.

When a straight catheter is introduced into the bladder of a dead subject laid out on a table, the instrument describes, in relation to the surface of the table, and the axis of the body, an angle of 45°. When the penis is raised, the angle in the spongy portion is effaced; but the curve in the membranous and prostatic portions remains the same.

The direction of the canal in the quiescent state has been compared to the letter S, which is true, when the bladder and rectum are distended.

When the penis is laid against the abdomen, only one curve is found. The urethra is very far from being straight, but it may be rendered so.

The parietes of the canal are soft and yielding, and capable of being extended, in the male, one inch without doing injury to the parts; while, in the female, the urethra may be so distended that calculus of the size of an almond may be extracted from the bladder through this canal. This passage is very frequently the seat of stricture, in fact, more frequently than all the remaining outlets of the body combined.

In the introduction of an instrument into the bladder, the rule of the veteran surgeon, Dr. Mott, is an excellent one, viz., "Make haste slowly."

Every surgeon must be aware of the difficulties attending the treatment of this form of disease.

Without stopping to speak of the usual modes of treatment recommended by most teachers, and in systematic works of surgery, I propose to offer for your consideration an entirely new method (as far as I know) of treating this formidable disease. It is one that has been adopted and used in the United States Marine Hospital, of this City, for the last four years, also, during my term of service, at the Mercy Hospital—and once in private practice—with abundant success. I refer to the treatment by forcible rupture. The instruments used are these which I hold in my hand.

I claim for this method of treatment the following advantages over the old methods:—

1st. It is more expeditious.

2d. In the hands of judicious operators, more safe.

3d. Is not so apt to be followed by relapses.

Every surgeon is aware of the length of time necessary to treat a stricture, by dilatation, for instance. I have known instances where weeks and even months elapsed before a cure was effected.

The danger attending this form of treatment is considerable, also. The liability to make false passages is great; in fact, that method of treatment can only be conducted by skilful hands.

In the treatment by rupture, a very few days, at the longest, suffice to effect a cure.

2. In the hands of judicious operators it is more safe.

Under this head I will simply state, that out of the large number of cases treated by this method, I have never known any bad symptoms follow. It is in use at the Marine Hospital almost every week, where I have had opportunity to observe its merits.

3. Not so liable to be followed by relapses.

The liability which exists for the return of a stricture after treatment by dilatation, or by caustic, is excessive, and is noticed by all authors. Erichsen says: "There is great tendency to relapse, and for the constriction to return, the stricture rapidly becoming tighter as soon as the introduction of intruments is discontinued."

I have not observed this to follow after treatment by rupture. The cases in which this method of treatment is applicable, are all forms of organic stricture, when the smallest-sized sound can be passed. It is necessary to place the patient under the influence of chloroform during the operation. I might cite cases illustrating this method of treatment, but as I have not any prepared, I will content myself by reporting one that occurred under my care at the Mercy Hospital.

Thomas Ott, American, aged 24, was admitted into the Mercy Hospital, March 1st, 1859, with stricture and spermatorrhœa, which affections he had had for four years. The cause of the stricture, which was situated in the membranous portion of the urethra, was, in all probability, the repeated applications of caustic, for the cure of the spermatorrhœa. He was treated during the month of March by gradual dilatation, but without much apparent benefit. On the first of April, that being the commencement of my term of service, he came under my care. It was with difficulty that a No. 2 sound could be introduced at

this time. I continued the introduction of sounds until I could introduce a No. 3, when I introduced the small-sized rupture instrument, and opened it to its full extent; a slight hemorrhage followed the operation, but nothing more. On the 1st of May, I operated with the larger-sized instrument, which was followed by no bad symptoms whatever.

The patient continued in the Hospital until the 15th of the following June, under treatment for his spermatorrhœa, during which time a large-sized sound was passed. There was no obstruction whatever. I have heard from the patient once since. He remains entirely well. Professor Davis observed the treatment of this patient, and its results.

ARTICLE XXXIV.

SURGICAL CASES.

By E. ANDREWS, M.D., Prof. of Surgery in Chicago Medical College.

Case I.—*Varicose Ulcer treated by Hypodermic Injection.* The cases of varicose veins treated by injection, which I published in the Examiner two months since, have had the effect to elicit considerable inquiry on the subject, as shown by numerous letters which I have received. The following additional one may be of first interest.

Michael Kenny was admitted to Mercy Hospital, six months ago, with a varicose ulcer on the left leg, about an inch and a quarter in diameter. The patient was a hearty, well-fed Irishman, inclining to corpulence. The ulcer was indolent, with thickened edges and indurated base, the floor of it feeling hard, and having little sensitiveness. The veins around it were varicose, some of them extending beneath the ulcer, and being marked by compressible streaks in the hard floor. This man was treated by every ordinary method which promised success, in vain. He had sulphur and muriate of ammonia internally, and nit. silver, sul. copper, scarifications, adhesive straps, olive oil and turpentine, chloride of zinc, muriate of ammonia, and,

finally, caustic potash, externally. Nothing had any more than a slight effect, and, at the end of six months, he was scarcely changed in his condition. The patient had resisted all advice to submit to hypodermic injection, but at length concluded to try it. I injected about three drops of tinct. ferr. mur. into each of about five varicose places, two of which were in the veins under the floor of the ulcer. Inflammation, to some extent, followed. The patient was treated by giving tinct. iron freely internally, and carefully supplied with a constant current of fresh air, to prevent aplastic phlebitis, and with an astringent lotion externally. A small abscess formed at one of the points of injection, which was lanced, and the whole affected tract was red and inflamed. The ulcer underwent no remarkable change until the abscess discharged, and the inflammation began to abate. The edges of the ulcer then commenced rapidly to cicatrize, and at the present time is nearly healed.

CASE II.—*Hydrocele.* This disease is commonly treated either by the seton, or by injections of tinct. iodine. In both these methods we are usually successful at the first operation. This and the following case, however, are introduced to show that both operations occasionally require repetition before they are completely successful.

A. B., a young man, had a hydrocele of two years' standing. It had been palliated occasionally by tapping—of course, without permanent advantage. A timid physician determined to inject the iodine, but fearing inflammation, he only used a very weak solution. The result was partly favorable, obliterating the upper part of the sac, but not the lower. He then sent the patient to me. I tapped the remainder of the sack, and threw in the tinct. of iodine in full strength. After keeping it there a few moments, it was allowed to run out of the pipe, as usual, and the tube withdrawn. This resulted in a moderate inflammation, and an obliteration of still more of the sack. When the inflammation subsided, there still remained a small hydrocele at the lower part of the tunica vaginalis. This I obliterated by a third injection, which completed the cure.

CASE III.—*Hydrocele requiring repetition of the seton.* A

H., a German, fifty-two years of age, and of good constitution, had a hydrocele for several years. The walls of the sac were so thick that no light from a candle could be passed through them; hence the ordinary translucency could not be detected, but an exploring trochar proved the nature of the contents. I determined to treat it by seton. A tape was therefore passed through it from below upwards, along which the fluid drained away. In four days a smart inflammation was set up, which caused the tumor to be swollen to its original size. The seton was then removed, and the inflammation gradually subsided, when the lower part of the sac was found not to be obliterated, and to be filling again with fluid. I inserted another seton, which I left in about a week, which completed the cure.

On the whole, I find that there is very little ground of choice between these operations, both being usually successful, but each of them, in a few cases, requiring repetition.

Case IV.—*Anchylosis of the knee.* A large number of anchylosed knees are grossly neglected by the profession. Many practitioners seem to be unaware of the fact, that nearly all the stiff knees which hobble around with the limb fixed at a right angle, and with the foot unable to reach the ground, can be straightened without risk, and often without even cutting the tendons.

C. Y., an Indian boy, in Mackinaw, was sent to me by a gentleman who took pity on him as a cripple. He had cut his knee with an hatchet, resulting in suppuration of the joint, which subsequently healed with anchylosis, and the knee fixed at a right angle on the thigh. The flexor muscles were also contracted. I cut both hamstrings, and applied a jointed splint, which was gradually extended by a screw brace. In six weeks the limb was completely straightened, and he was sent home with instructions to wear a straight splint until there was no tendency to a return of the flexure. The patient not remaining long enough, I could do nothing towards restoring motion, but still the limb will be strong, and enable him to go without crutches.

Case V.—C. F., a girl twelve years old, had caries of the

right knee, with absorption of the head of the tibia, and fistulous openings into the joints. After nearly recovering from the inflammation, and after the fistulas were nearly healed, she was brought to me with the knee anchylosed, bent at a right angle, and the tibia slightly displaced backwards and outwards. An extension splint was applied without cutting the tendons, and the limb was straightened in about eight weeks.

CASE VI.—S. H., a boy aged thirteen years. He had caries of the knee, with destruction of part of the head of the tibia, some years ago, which gradually healed, leaving the knee deformed exactly like Case V., but worse. Fistulas all healed, and the knee bent at about a right angle. Applied an extension splint, which brought the foot to the ground in about ten weeks. He now walks about with a staff, keeping the limb in a straight position by means of a straight splint.

CASE VII.—A woman aged thirty. Has had an inflammation of the right knee without caries. It is bent nearly to a right angle, but preserves a slight mobility. I applied the extension splint, which has brought down the foot more rapidly than usual. As it now appears, it seems that two weeks application of the splint will completely straighten the limb. Exercise will probably restore a degree of mobility in this case.

In many of these cases it is not possible to restore the control of the extension muscles over the limb, on account of the patella being firmly glued to its position, so that it will not glide on the joint, and we have no effectual and safe way of dislodging it; still, if the foot is brought to the ground, and the knee remains stiff in a nearly straight position, it immediately becomes of use in walking. The patient is able to dispense with crutches, and move about again in something like a natural manner.

AN EASTERN ANTIDOTE AGAINST FEVER.—There is a great mortality from a description of fever, just now, in Gwalior. The Maharajah has ordered the perpetual performance of various religious ceremonies, with a view of checking the course of the epidemic.

ARTICLE XXXV.

CONTINUED FEVER.—THE TYPE OF DISEASE NOW PREVALENT.—CASES.—INJURIOUS EFFECTS OF EVACUANTS IN THE EARLY STAGE, &c.; BEING THE ABSTRACT OF A CLINIC IN THE MEDICAL WARDS OF THE MERCY HOSPITAL.

BY N. S. DAVIS, M.D., Prof. Clinical Medicine, &c., Chicago, Ill.

GENTLEMEN:—The case before you is a female, aged about 20 years, a native of Ireland, and a resident of this country only a few weeks. Some ten days since, she came to my office, complaining of some pain in her head, with some pain also in the back and limbs; a sense of oppression or tightness across the chest; looseness of the bowels; loss of appetite, and lightness or dizziness in the head. She presented an anxious expression of countenance; dryness of the lips; a thick, dirty white coat on the middle and posterior part of the tongue; some tremulousness of both tongue and lips; skin dry, harsh and congested; pulse soft, weak, and about 110. She had been complaining about one week, during which time she had taken two doses of "salts and senna," each operating freely as physic, and, during the two days that had intervened since the second dose, had continued to have four or five copious, thin, intestinal discharges each day. I advised the patient to go home, keep quiet, take bland nourishment, and sufficient anodynes to control the intestinal evacuations, and informed her that she had an attack of continued fever. About one week after she was brought to the hospital. She is, consequently, now near the end of the second week of her fever.

The symptoms I wish you to notice carefully, at present, are the following:—The whole cutaneous surface is dry, harsh, and warmer than natural; the face slightly redder than natural; eyes suffused, and expression dull; position dorsal; respiration short, accelerated, and accompanied by strongly marked dry bronchial râles all over the chest, and occasional rough cough;

dulness on percussion over the lower and posterior part of the chest, but very little expectoration; pulse 115 per minute, small and weak; abdomen tumid, inelastic, but only moderately tympanitic; three or four thin, brown, intestinal evacuations each day; tongue and lips dry, dark red, and tremulous; slight subsultus; and hearing dull.

Such are the more important symptoms presented by the patient; and what are the pathological conditions indicated by them? For symptoms are valuable to a rational practitioner, only as they indicate, more or less clearly, ths nature, location, stage of progress, and tendencies of such pathological or morbid conditions as actually exist. In the patient before us, the somnolency, the dulness of hearing, the sub-sultus, and the frequent mental wandering point directly to a strongly depressed condition of the nervous functions. The dryness of the skin, the lips, the mouth, the mucous surface of the bronchial tubes, and the scantiness of urine, equally indicate a depressed or retarded condition of all the secretory functions. The moderately congested and livid hue of the skin, the congested condition of the lower and posterior portions of the lungs, as indicated by dulness on percussion, and the soft, weak pulse indicate general feebleness of capillary circulation.

Thus, the three great functions of innervation, circulation, and secretion are much impaired, producing all the phenomena of a low type of fever, while in this patient the enfeebled capillary circulation in the lungs has led to a serious degree of infiltration of the pulmonary tissue, and in the mucous membrane of the lower half of the intestinal tube to a scarcely less dangerous degree of effusion constituting the liquid stools and a tendency to softening or ulceration. Such are the proximate pathological conditions presented by the patient.

But a further inquiry arises, of great interest, but less easily answered, namely:—What causes the well-marked depression of all the functions just named? Is it the action of some morbific agent or fever poison, primarily on the nervous centres depressing nerve force, and through this influencing the vascular and secretory functions? This was essentially the doctrine of Cul-

len, and of a majority of writers on practical medicine, from his day to the present time. A more modern, and somewhat popular doctrine at the present time, alleges that the supposed fever poison acts primarily upon the constituents of the blood by a zymotic or septic influence, and that all the important functional disturbances are consequent on the deteriorated condition of that fluid. A few, like Virchow and Addison, who make all the phenomena of life depend on cell action, would make the phenomena of fever depend on the primary modifying influence of the fever poison on the functions of the cells, both in the blood and the tissues. Careful study and extensive clinical observation will show you that all these theories are defective and unsatisfactory.

My own opinion has often been expressed, both here and in the lecture room. It is, that the initial steps of morbid action, constituting fever, are neither in the nervous, secretory, or vascular structures or functions separately, but in the elementary properties common to all the tissues. But it was no part of my purpose, at this clinic hour, to dilate upon the essential pathology of fevers. The symptoms of the patient lying before us are of the most serious import. The universal depression of vital properties, with the extensively engorged condition of the lungs, rendering respiration imperfect, while the frequent intestinal evacuations still continue, renders the prognosis extremely unfavorable. The deteriorated condition of the blood always existing in typhus, is here increased by the diminished interchange of carbonic acid gas for oxygen through the lungs, and there is danger of a suspension of life before any change can be effected by which a more healthful impression of the blood upon the capillary and secretory structures can be made.

Still, the rational indications for treatment are plain. They are to repress the intestinal evacuations, to arrest the further engorgement of the pulmonary tissues, and to sustain the functions of the nervous and vascular systems. To accomplish the first, there is probably no remedy more efficacious than oil of turpentine combined with a certain proportion of tincture of opium. It not only exerts a peculiar action on the mucous surfaces of

the intestines, by which the tone or contractility of the capillaries is increased and the accumulation of blood consequently diminished, but it also increases the activity of the whole capillary vascular system. Hence, it not only fulfils the local indication, but aids materially in accomplishing the third object named. To devise remedies that will relieve the extreme congestion in the lungs and promote the reäbsorption of the dark blood infiltrated into the posterior and lower parts of these organs is no easy task. The immediate cause of the infiltration or engorgement is a failure in the susceptibility of the capillaries and their consequent dilatation. When this state of bronchial and pulmonary congestion commences early in the progress of the fever, I have found no remedy for its relief so reliable as small doses of tartrate of antimony and potassa, given in combination with opium sufficient to prevent any danger of acting on the bowels. Given in the early stage, it lessens the general febrile action, promotes perspiration, and renders respiration and expectoration much more free. But when the patient, as in this case, has already advanced to that state when the pulse is small and weak, the skin relaxed, the abdomen tympanitic and bowels very loose, with much dulness on percussion over the middle and lower part of the lungs, and somnolency, you can expect no benefit from so direct a sedative as antimony. The principal reliance must then be placed on such remedies as tend to sustain the sensibility and action of the nervous and vascular systems, and prevent the further deterioration of the blood. We will give this patient ten drops each of oil of turpentine and tincture of opium, in the form of an emulsion, every four hours, and the sixteenth of a grain of strychnine with four drops of nitric acid dissolved in sweetened water, between. We will also dissolve two drachms each of chlorate of potassa and gum Arabic in a tumblerful of cold water, and let the patient take a tablespoonful every three hours. The patient must also be fed regularly, every two hours, with two or three tablespoonfuls of a porridge made of sweet milk and wheat flour or oatmeal. Seeing the sub-sultus, the weak pulse, the oppressed breathing, the dingy or leaden

hue of the skin, and the mental dulness exhibited by the patient, you ask why I do not order brandy or other alcoholic stimulant? I answer, that nearly thirty years of careful observation at the bedside of the sick has satisfied me that under such circumstances strychnine is a far more reliable remedy for sustaining the nervous functions than alcohol, while the effects of the latter, in diminishing the decarbonization of the blood, makes it positively detrimental to the already seriously embarrassed condition of the lungs.

Before leaving the subject suggested by this patient, I must add a few words in relation to the character of the cases of continued fever prevalent in this city the present season, and a caution in regard to the use of harsh evacuants in the early stage. Since the epidemic of erysipelas, in the fall and winter of 1863, a large amount of our attacks of continued fever have presented, prominently, the symptoms of typhus rather than those of enteric typhoid fever. That is, the first stage has been accompanied by more intense headache; more restlessness; more frequent pulse and respiration; often a semblance of constipation; a thick whitish coat on the tongue, with less tendency to change to red and dry; and the much more frequent appearance of a mulberry or flea-bite rash early in the second stage. The apparent torpor of the bowels, coupled with the coated tongue and intense headache, in the early stage, has often led the patient, and sometimes under the direction of his physician, to use active cathartics and, in a few instances, emetics. I have known of no instance in which such a course has not been productive of very bad consequences. It often induces an early and excessive prostration, coupled with a fixed congestion of the intestinal mucous membrane, greatly favoring softening of the membrane and intestinal *hemorrhage* in the more advanced stage of the fever. Several cases have come under my observation illustrating this tendency.

A few weeks since, I was called to see a young man, in consultation with his attending physician, who had been attacked severely with typhus fever. The bowels not being loose in the early stage, the physician gave him several compound cathartic

pills, which did not seem to operate harshly, but soon after a pitcher of lemonade was prepared with half an ounce of chlorate of potassa in it, intending to have the patient use it sparingly as a drink. The nurse, however, allowed the patient free access to the pitcher, and he drank its contents all in one night. This was immediately followed by such copious intestinal evacuations, some of them tinged with blood, that the patient was almost hopelessly prostrated in a few hours and died during the succeeding week.

Another case was that of a man, aged about 25 years, who had recently come to this city. He first called to consult me at my office. I noticed, at once, an unusually haggard expression of countenance; tremulousness of the lips and tongue; a very soft and frequent pulse; with unsteadiness of gait in walking. I learned that he had been laboring under all the symptoms of the first stage of continued fever, for ten days, during which time he had taken repeated doses of active physic, to remove what he called "biliousness." I explained to him the nature of his sickness, prescribed some anodyne and astringent medicine to check the excessive intestinal discharges, and urged him to keep quiet in bed. He persisted, however, in keeping up three or four days longer, at the end of which time I found him in bed, with the same tremulous lips and tongue; the same haggard countenance; a still weaker pulse; and a peculiar tawny hue of the skin, as though the hematine of the red corpuscles had become diffused in the serum of the blood and stained all the tissues. His mind was dull, hearing impaired, urine scanty and turbid, and bowels still moderately loose. In a few days, petechial spots appeared over the chest and abdomen, and, in about ten days from the time he took his bed, he passed at once a chamber-vessel half full of dark, offensive, and partially coagulated blood. The discharge was repeated three or four times within thirty-six hours, producing collapse and death.

The last case I shall mention, was a young man, aged about 23 years, sanguine temperament, and usually in good health. While on a business tour in the country, during the latter part

of August and first part of September, he was taken with the usual symptoms of the forming stage of continued fever, viz.: severe pain in the head, back, and limbs; loss of appetite; furred tongue; dryness of the skin and mouth, &c. On arriving at one of the towns on the Mississippi river, he felt so unwell that he was induced to take a warm foot-bath, accompanied by an *emetic*, and followed by an active cathartic. The remedies produced excessive vomiting and purging, but in no degree diminished the headache or fever. With some assistance on the way, he reached his home in this city on the third day after he took the evacuants. His face was flushed; eyes watery and dull; skin dry and moderately hot; tongue covered with a white fur and red at the edges; lips and mouth dry; pulse 110 per minute, small and weak. He complained of a general sense of heaviness and oppression; constant thirst; and severe dull pain, with a sense of dizziness through the whole head, but more severe in the cerebellum and base of the brain. Since he took the emetic and cathartic, three days previously, he had retained nothing on his stomach, more than a very few minutes. A single spoonful of cold water would be promptly ejected by vomiting. I endeavored to overcome the irritability of the stomach by giving a solution of bicarbonate of soda, one drachm, and sulphate of morphia, one grain, in two ounces of water, in doses of a teaspoonful every hour. Sinapisms were also applied to the epigastrium, and cold applications to the head. On the second day, finding the irritability of the stomach only partially allayed, while all the other symptoms were unchanged, I gave, in addition to the soda and morphia, a powder of calomel, 2 gr., every four hours, until it should induce a movement of the bowels. I did this because the continued intense suffering in the head, with fulness of the temporal and carotid arteries, and heat above the rest of the body, caused a fear that a low grade of meningeal inflammation might complicate the case. After four powders had been taken the bowels moved, and the irritability of the stomach was so far relieved that liquids were retained, if taken in small quantities, but the pain and sense of confusion in the head continued unabated, and there was much

mental wandering. The pulse was frequent, small, and weak; respiration hurried; some sub-sultus. I ordered a solution of permanganate of potassa, one grain to the ounce of water, to be taken in doses of a tablespoonful every three hours, and a tablespoonful of thin milk porridge every hour. On the following day, finding less heat in the head, but more sub-sultus and mental wandering, I gave one grain of valerianate of quinine in sugar-coated pill, between each of the doses of permanganate, and doubled the quantity of milk porridge for nourishment. He continued this treatment three days, during which the general symptoms underwent but little change, except that the pulse became a little less frequent, the fever less active, and a characteristic typhus eruption appeared quite copiously over the trunk of the body. The hearing also became dull, and a large bullæ or vesicle, filled with purple or bloody serum, appeared on the outside of the right thigh, and another on the scrotum, while the bowels became slightly relaxed. Owing to these symptoms, an emulsion of oil of turpentine and tincture of opium was given in the place of the solution of permanganate of potassa, and the doses of valerianate of quinine were increased to two grains. Under these remedies, with as much simple nourishment as his stomach would bear, he continued to progress favorably, though changing but slowly, for three days longer, when there occurred one pretty copious discharge of dark blood from the bowels. I immediately gave him a powder containing tannate of quinine, 2 grs., pulv. geranium root, 5 grs., and pulv. opium, ¼ gr., and repeated it every two hours, with a teaspoonful of the turpentine and laudanum emulsion between. After three doses had been given, and no movement of the bowels occurring, the interval between the doses of medicine was lengthened to two hours. When twenty-four hours had elapsed without further evacuations, the powders were discontinued, and the valerianate of quinine again given in their place.

From this time, the patient began slowly to convalesce, and has since fully recovered. These cases strongly illustrate the evil effects of active purging in the early stage of continued

fever. Such practice not merely prostrates the patient, but it directly increases that irritability of the mucous membrane with its aggregate glands of Peyer, which so generally constitutes an important pathological condition in all varieties of continued fever. I think I have never known a case of typhoid or typhus fever, in which active emetics or purgatives were used in the early stage, that did not run a protracted and dangerous course.

ARTICLE XXXVII.

EDITOR MEDICAL EXAMINER:—

DEAR SIR,—I notice, in the June No. of the EXAMINER, a short article over the signature of X, upon the patenting of surgical instruments, and comparing it to patenting the "Paths of Virtue," by a clergyman.

Now, unfortunately for the comparison, this is just what the clergyman does. Look every week into the *N. Y. Independent*, and see the heading of the sermon of Henry Ward Beecher, "Entered according to Act of Congress," &c. Take up any book written by an American upon religion or morals, and the warning appears against the use of its wisdom without paying for it. The copyright is to literary labor what the patent right is to mechanical labor; and it becomes a question whether it is not time for the medical profession to outgrow its old prejudice against patent rights. This prejudice has lingered from the dark ages; in which to steal the honest earnings of the *worker* was honorable. Now the public maxim is:—"To every man a just reward for his labor."

X admits that the feeling or usage against patents is not one growing out of any necessary relations, but claims that it is one of common consent, among medical men. Then let us, by common consent, have the labor of men who make books without paying them for it. The book maker may console himself with the reflection that he reads a vast amount, which he has never paid for, and besides that he is working for science and humanity. It is one of the strange things that medical men

will willingly pay an author through the copyright for his labor, but will not willingly pay an inventor for his labor, though in many cases more valuable to the profession. This unreasonable prejudice is fostered by the general compounding of secret remedies—nostrums which remunerate through a gigantic system of advertising and falsehood with patents. Nobody that understands the business patents a medicine or compound, but he keeps the composition a secret, and protects himself from imitation by the name, which is regarded as a *trade mark*, by the label which may be *copyrighted*, and by the proprietary stamp which is furnished by the Government. The patenting of the compound opens its composition to any one who will pay for transcribing the patent. Z.

Selections.

ON A NEW REMEDY FOR DYSENTERY.

By WILLIAM KERR, Surgeon, &c., &c.

Twelve years ago, an accidental circumstance led me to attempt an improvement in the treatment of dysentery. Commencing with camphor and henbane, added to opium, I experimented on every officinal narcotic, coming to the conclusion, that of these the most efficient combination was one of opium, henbane, hemlock, stramonium, and digitalis. I had cause to be better satisfied with this than with any previous combination; but from time to time failures or tardy success induced the conclusion that something was still wanting—that something, if to be found at all, was therefore to be discovered in plants not yet admitted into the Pharmacopœias. After a long search, cicuta maculata, sium lineare, and conio-selinum canadense, indigenous to the swamps and woods of Canada, supplied the deficiency better than any others I happened to try. Sium lineare supplanted hemlock (conium maculatum), on account of the combination containing the latter occasionally producing pain in the bowels and failing, while that with sium lineare gave relief; and dulcamara supplanted henbane, as experience showed it to be better adapted to act beneficially along with the other members of the

combination. Its constituents, when the investigation was concluded, were as follows:—four officinal, viz., opium, stramonium, dulcamara, digitalis; three non-officinal, sium lineare, cicuta maculata, conio-selinum canadense. All are more or less narcotic; and digitalis, dulcamara, and sium lineare are also diuretic. So many are necessary evidently, from each possessing some peculiarity in the way in which it affects the system: the combined effect of these peculiarities being required to combat the disease.

Without opium the combination is slightly aperient, improves appetite, promotes sleep, and, according to experience gained in dysentery and other diseases, heals ulceration of the mucous membrane. In dysentery, opium is necessary apparently to check the frequent motions of the bowels, the strictly curative power depending chiefly, if not altogether, on the other ingredients. In infants generally, and also in a few adults, digitalis does not act favorably. In such instances I have substituted squills with great benefit. Adults generally require the combination with digitalis; of a very few infants the same may be said; and to many adults the combination with digitalis, or that of squills, may be given indifferently. Excepting opium, the part employed is leaf. Digitalis and squills are combined in the proportion of half a part of each—all the others in that of one part. For infants, opium is reduced to a half part. The usual dose to adults is six and a half grains, digitalis or squills being each half a grain, and all the others one grain each.

Between five and six years were spent in determining the components. Beginning with three, I never afterwards, either in adding or subtracting, changed more than one plant, till I had as fully as lay in my power ascertained the result of each change. In this manner I have experimented on thirty-two plants or their products. I have pulled down the combination and built it up again, and thus done my best to ascertain the necessity for each component. For upwards of seven years the combination has been used with very great success; but as my own experience may be suspected of being biassed, I shall confine myself to the reports of others.

Dr. Brown, of Berlin, C. W., had a very severe attack, of which he published an account in the *Montreal Medical Chronicle* for December, 1858.

Of this paper the following is a copy, slightly abridged:—"In August last, I was seized with epidemic dysentery. The usual remedies were promptly administered—opium, the quantity of which speedily rose to twenty-one and even twenty-four grains

daily, together with mercury, acetate of lead, and ipecacuanha, but no amendment took place. I vomited incessantly, and, though tormented with thirst, could retain no fluid. In my case the effect of large doses of opium was prostrating and overpowering. I did not sleep, but could scarcely be said to be awake, except to the consciousness of severe pain, agonizing tenesmus, and frequent vomiting. I had been ten days ill, nature was sinking, collapse was to be feared, when Dr. Kerr visited me. He immediately gave three and a half grains, or half a grain of each of the seven ingredients." (The recipe is here given by Dr. B.)

"I was very restless from a sensation of sinking and severe pain. In half an hour, after dozing a few minutes, I became aware of a great change. I could lie quiet; the distressing tenesmus was less, pain in the body and limbs less severe, the sensation of sinking relieved, a glow of warmth was supplanting the cold of threatened collapse, and an inclination to sleep, not before experienced during my illness, was stealing over me. The first thought was amazement at the change, then a faint recollection of a new medicine crossed my mind, and I resigned myself to its influence. I was immediately asleep, and for an hour and a-half had a comfortable and refreshing sleep, unaccompanied, comparatively speaking, with sensorial disturbance. When I awoke all the symptoms were relieved. Seven grains were given every six hours; but the quantity of digitalis being too great, this drug was reduced from a full to a-half proportion, making each dose six and a-half grains, which were given every four hours.* I spent twenty-four hours almost wholly in sleep; calls to rise were still frequent, but the tenesmus was less severe, and, though I retched a few times, vomiting ceased. In a few days appetite began to return.

"During twelve years' practice, I never, in the treatment of dysentery, met with a narcotic to be compared with Dr. Kerr's combination, in relieving general irritability, pain, and, above all, nausea and vomiting. It produces a wonderful degree of comfort, unattended by sensorial disturbance. From thirty minutes after the first dose was taken, my suffering was comparatively nothing. Little hope was entertained of my recovery previous to the first dose, but became sanguine before I had taken the third."† Dr. Bingham, Dr. Brown's medical attend-

* Prior to this all the ingredients were equal.

† The possibility of any future report from Dr. Brown was cut off by his accidental death a few months afterwards.

ant, in a supplement, vouches for the accuracy of the narrative, and relates six confirmatory cases from his own experience.

Dr. Bingham, supplied with medicine by me, treated successfully the sporadic cases which occurred in the following years:—In August, 1862, he, with Dr. Bell, by this time his partner, applied to me, making the following statement:—Dysentery had broken out epidemically in their locality, but not having any of my medicine, they had treated it with the usual remedies; a woman had died the preceding evening, her husband was dangerously ill, and other two were apparently dying. Furnished with a supply, they hastened to their patients. The husband just mentioned, though previously ill for five days, was relieved in less than an hour, and had a rapid recovery. One of those believed to be dying recovered readily, though upwards of seventy years of age; the other died, time to administer only a single dose being afforded. During the remainder of the epidemic there was not a death, though, judging from the severity of the attacks, six or seven would have proved fatal under the ordinary treatment. In the autumn of 1863, dysentery was again epidemic at Ayr, C. W., where Drs. Bell and Bingham resided. Without delay they applied to me for medicine, and treated successfully every case; while the only other medical gentleman in the same village adhered to the ordinary treatment, and out of a smaller number of patients lost five by death.

Dr. Mackintosh, of Hamilton, C. W., has employed the combination in dysentery since 1861, and in all cases with success. From his notes I give the following, on account of the epidemic and generally severe character of the attacks:—

"1864, 15th July.—A child, four years of age, seized two days ago, bloody stools every half hour, accompanied with vomiting and severe pain. Applied hot fomentations, and gave three grains of the squill combination with opium every four hours. These were speedily followed by relief; the child had a pretty good night, and on the 19th is reported quite well.

"17th July.—A girl in the same house, nine years of age, was seized during the night with severe dysentery. Applied hot fomentations, gave five grains of the digitalis combination with opium every three hours. Immediate relief followed, and next day she was convalescent. Six doses in all were given.

"22d July.—A boy, seven years of age, seized yesterday, and now severely affected. Gave three grains every three hours, and by evening he was much relieved. Nine doses completed the cure.

"6th August.—A man, aged thirty, attacked during the night with rigors and vomiting, followed by dysentery. In the morning seven grains were given every three hours. In two days he was quite well.

"12th August.—A man, aged sixty-four; bloody motions every half hour, with nausea. Same doses given as to last patient; next day almost well.

"15th August.—A woman, aged fifty-six, during the night was attacked with severe dysentery. Same doses given. By evening was much better; and by the third day complained merely of weakness.

"17th August.—A woman, suddenly seized with very severe dysentery, visited shortly after; she was then cold and faint, and stools passed without control. Gave seven grains of the digitalis combination, with one-fourth of a grain of morphia (instead of opium), every two hours. After the third dose relief was so great that morphia was altogether omitted, but seven grains of the other combination were continued thrice a day.

"19th.—Almost well."

Dr. Philip, of Galt, late assistant-surgeon H.M. 18th Regiment, has furnished me with the following statement:—"Your remedy was administered by me in six severe, besides a number of slighter cases of dysentery, during the autumn of 1862. Relief was uniformly obtained after one to two doses, and recovery completed within a few days. One of the cases was characterized by profuse sanguineous discharge, and, occurring in a delicate female, would probably have proved fatal but for the timely administration of this medicine. In contrasting the success of treatment in these instances with the fruitless and unfortunate attempts made by myself and others at relief in the severe dysentery of the Crimea, it is impossible not to be struck with the readiness and efficacy of this remedy. Every known system of treatment, I believe, was tried, and the medical history of the compaign shows with how little benefit. Many of the cases which in the Crimea ended fatally were not apparently of a more severe character than some of those which yielded rapidly to your medicine."

Dr. Merritt, who at the time the following occurred was chief of the Medical Department of the Confederate Army of the Mississippi, thus writes to me:—"In August, 1863, when in charge of Camp Jackson, I came into possession of a quantity of your medicine for dysentery. The rapidity of relief and of cure was exceedingly striking. The men were on their feet in a few days, and in worst cases I did not give more than eight

doses of six grains each. My supply lasted ten days, and was administered to about sixty patients, only one of whom died. For some time before I obtained the medicine the deaths ranged from one to three daily, and as soon as it was all expended the mortality resumed the same rate."

A child of the Rev. Mr. Robb, Calabar, Western Africa, in the latter part of July, 1863, was seized with dysentery. At this time the favorite treatment at the mission was large doses of ipecacuan; but this illness resisted every prescription of Dr. Hewan, the medical attendant. By the middle of August the child became so reduced, and death so impressed on the visage, that recovery was regarded by all to be hopeless. At this juncture the parents recollected a packet of the combination which I had given to them. After the second dose the child awoke from a refreshing sleep, easy and tranquil, and the medicine being continued, recovery went on rapidly, without a single untoward symptom. A second attack of dysentery, a few months afterwards, was stopped in a single day. A native African was cured of what threatened to be a severe illness by ten doses.

Fifteen medical men besides myself have used this combination in dysentery; it has been given in the warm region of California, amid the privations and discomforts of a camp in the hot summer of the Southern States, at sea on the Atlantic, in the tropical and pestilential climate of Calabar, and there is a remarkable uniformity in the testimony of all. Relief generally in an hour, restoration to health in a few days, and the great majority cured within a week. A few cases were a little tedious, and a still smaller number lingered three or four weeks; none lapsed into chronic dysentery; and out of about *four to five hundred patients*, though several of the attacks were very severe, as severe as some of the reporters had ever witnessed, *only four died.* One of these was a delicate child; the second, an infant on whom the medical attendant had previously exhausted all the ordinary medicines; and the third and fourth have not been specially reported to me. I have been told of some instances, and a few have occurred in my own practice, of that generally fatal variety of dysentery characterized by profuse bloody discharges, usually attended with severe pain, all of whom were cured without difficulty. The combination fails in chronic diarrhœa, possibly because this disease is usually unaccompanied by lesion of the mucous membrane. I have not seen or had reported to me any disagreeable effect from this remedy, though, judging from the character of its constituents, such is possible, were the doses unreasonably large. The *medicinal* power is

certainly greatly increased by the combination, but not the *poisonous*. Relief speedy and great of pain, far sounder and more refreshing sleep than that from opium, and cessation of discharges, are the usual effects. The nearly uniform success has not given either my correspondents or myself opportunities of trying the treatment by large doses of ipecacuan.

In the course of my experience, several persons afflicted with chronic dysentery have been restored to health—some by the combination containing opium, others by that without. Dr. Ogden, lecturer on materia medica, Toronto, tells me of a case of acute dysentery where, from idiosyncrasy, opium disagreed, but which was speedily cured by the combination, leaving out this drug.

Cases of cholera infantum have been reported to me by medical friends as treated successfully by the combination containing opium. Of summer cholera I select the following on account of its severity. A young man was seized during the night, and visited by Dr. Bingham in the morning. At this time he was violently cramped, skin cold and clammy, voice husky, and pulse feeble. Eight grains of the combination containing opium were given; from this time he vomited no more, a glow of warmth (as in Dr. Brown's case of dysentery) supplanted the cold of threatened collapse, and cramps rapidly abated in severity, though all day he had muscular twitchings. Four more doses completed the cure. Summer cholera has been for some years a rare disease, but all treated by my medical correspondents or myself have readily recovered.

In conclusion, I beg to suggest the medicine now recommended as worthy of trial in Asiatic cholera. If a remedy for this disease is ever to be found, it clearly must be one which shall take almost immediate effect.—*Edinburgh Med. Journal.*

Doon Grange, near Galt, Canada West, 5th April, 1865.

CASES OF CEREBRO-SPINAL MENINGITIS IN POST HOSPITAL, GALLOP'S ISLAND, BOSTON HARBOR, FROM SEPTEMBER, 1864, TO MAY, 1865.

By CALVIN G. PAGE, M.D.

[Reported to the Boston Society for Medical Improvement, June 12th, 1865, and communicated for the Boston Medical and Surgical Journal.]

Case I. L. B. L., recruit, from Pittsfield, Mass., 18 years old, light complexion, blue eyes, and of bilious, sanguine tem-

perament. Was admitted to hospital Sept. 14th, having been unwell for two days previous to reporting at sick call. When first seen, patient was complaining of severe headache, attended with extreme weakness; had been vomiting bilious matter, and had had several evacuations of thick mucus of the consistence of gruel; no pain in the bowels; tongue was badly coated and flabby; pulse at wrist barely perceptible: patient stupid, but not delirious. I ordered hot baths, during which purple spots of irregular shapes appeared on the abdomen, chest, and thighs, increasing in size and color very rapidly; extremities cold and shriveled. By hot applications externally, and stimulants internally, reaction commenced in three hours from the bath, and with it delirium, exhibiting itself by continued incoherent talking as long as the strength lasted, ending in a whisper at the last breath.

Sept. 15th.—Noticed rigidity of the muscles of the neck, with extreme tenderness of spine in lumbar region, and tendency to roll from one side to the other; very restless, constantly talking, and momentarily conscious when spoken to. I noticed, this day, an eruption about the mouth and nose of an erysipelatous nature, the purple spots rather tending to recede or dry, with a circumscribed base, as if about to slough, which did not occur, but they gradually disappeared by the fifth day from their appearance. There was no marked change in patient from this time to his death, which occurred on the 19th. Opisthotonos increased to the last, yielding to no treatment. Allowing the disease to have commenced on the 12th, two days previous to his entry to the hospital, the length of the attack was seven days.

Case II. E. D., recruit, from South Reading, Mass., 15 years old, dark complexion, slight in person, and not a healthy looking boy. Patient was admitted January 29th, complaining of excessive pain in the head, of cold running down the back, and sickness at stomach, vomiting thick bilious matter. Cold applications were made to the head, and blisters to the spine and neck.

Jan. 30th.—Complains of pain "all over;" very sore to the touch, and no diminution of pain in head; is inclined to coma. Face, to-day, is flushed, and pulse 120, slightly tremulous. Blisters drew well; also had a free evacuation from the bowels, but without result. Symptoms rather tending to congestion, which proved to be the case on the following day, as the patient died comatose, and with stertor in breathing towards the close. There was no decided opisthotonos in this case, nor petechiæ,

but from the extreme sensitiveness of touch and extent of pain in the head, I could class it under no other head.

Case III. B. F. W., recruit, from Boston, 15 years old, slight in person, and not of robust constitution. Was admitted to hospital Jan. 9th, 1865, complaining of sickness at stomach, severe pain in the head, and aching in every joint. The whole surface had a peculiar mottled appearance, being much like a faint eruption of measles, the spots more generally diffused, however, than in rubeola; having measles in the hospital at the time, I concluded to put him in the measles ward. Patient was delirious at times during the day, and very restless; pulse 130.

Jan. 10th.—Could perceive no eruption; pulse still 130, and irregular. Had him put in the main ward. No abatement of pain; still delirious and very restless.

11th.—Patient seems brighter, but no better; the pulse increasing and tremulous; face livid; head very hot, with decided symptoms of congestion; no opisthotonos; pupils dilated; breathing labored. Patient died in the early part of the afternoon. Like the preceding case, I could class it under no other head, although the symptoms were indistinct.

Case IV. O. W., recruit, from near New Bedford, 19 years old, a stout, robust, healthy person. The only defect found at time of examination, was a dry, hard, callous-like ulcer on the bottom of the heel, which, from his own account, discharged occasionally a watery fluid, causing no pain, nor in any way interfering with his daily avocation as a teamster. January 28th, patient came to sick call, feeling slight headache and tired. I ordered cinchonated whiskey, and excused him from duty.

Jan. 29th.—Reported this morning as feeling much the same; had vomited during the night, from overloading the stomach with sweetcake and pie. In the afternoon of the same day, the sergeant came to the hospital, stating that the patient was much worse, and was turning purple. I ordered him brought to the hospital immediately. On his arrival, I found the whole surface covered with petechiæ; patient insensible, and evidently too far gone to rescusitate. No morbid symptoms in this case until within thirty minutes of his death.

Case V. L. C., an old soldier, from Plymouth, Ct., 30 years old, was sent to this post for transportation, convalescent from some disease, I know not what. I was called to see the patient in barracks, as having a fit. Found no paroxysm, but a constant tumbling from right to left side, he unable to speak and seemingly unconscious. I ordered him to hospital, and administered

chloroform with the usual effect weile under its influence. Patient vomited bile, with no change of symptoms, and was so restless as to require strapping to the bed. Symptoms yielded slightly under large doses of opium, producing, however, no real relief. He died the day following of congestion. No opisthotonos or petechiæ, but emprosthotonos, with decided cerebral trouble of some kind.

Case VI. A. A. M., recruit, from Cambridgeport, Mass., 19 years old, stout and healthy, of sandy complexion, a teamster. Came to sick call, feeling unfit for duty, but not really sick. Gave no medicine. In the afternoon, came to hospital feeling sick at stomach, with slight drowsiness of head. Gave an emetic, which had, seemingly, a favorable effect. This was at at 4 P.M. At 6, I examined patient and found him, to use his own words, feeling every way comfortable, but cold. I could discover no pulse at the wrist, and extremities were stone cold. I changed his bed to one beside the stove, to which he walked with perfect ease. Could discover no petechiæ, although the steward noticed them when he first came in. No opisthotonos, but decided symptoms of congestion. He died at 9 that evening, having the stertorous breathing similar to the preceding cases.

Case VII. J. E. S., an old soldier, from Concord, N. H., 22 years old, florid complexion, of nervous, sanguineous temperament; subject to epilepsy. Patient was brought here from the boat, having been taken while *en route* for this post. Symptoms were, excessive pain in the head and limbs, and prostration; no vomiting or petechiæ. I applied leeches to the temples, and gave oleum ricini, ℥ss., ol. croton, tiglii, gtt. iij. This was February 15th. The day following, patient complained less of pain in the head, but felt stiffness in cords of neck. Made use of stimulating liniment to neck, and gave pil. hydrarg. gr. vij, at bedtime.

17th.—Is feeling better, but very weak. Ordered stimulating diet, and continued the liniment. On the 20th, patient was able to sit up; still very weak.

21st.—Patient complained more of stiffness of neck and joints of lower extremities; is feverish and wandering, inclining to whistle rather than to talk. Could perceive no swelling of joints, and but slight contraction of muscles; tongue coated and not easily managed. Patient remained much the same for some days. On the 26th, noticed a difficulty in swallowing and a hesitation in answering questions; head more inclined to left side, evincing great pain when moved; countenance troubled,

and had a peculiar stare when spoken to; evacuations from bowels and bladder involuntary, although regular and natural. From this date, patient gradually sank, with no change in character of disease, and died March 17th, 1865, four weeks and two days from first attack. Could discover no petechiæ in this case, but decided opisthotonos of the entire left side, with complete prostration, was present from Feb. 21st. Patient had gonorrhœa when admitted, which continued to the time of his death; also slight swelling of testicle in the early part of the attack.

Case VIII. O. B., old soldier, 20 years old, stout, and to all appearance healthy. Was admitted to hospital February 8th, 1865. Complained of excessive pain in head, neck, and side, to which blisters were applied, and pil. hydrarg., gr. vij, was given at night.

9th.—Head and neck still very painful, patient shrinking from the slightest motion of either. Ordered liniment to neck; also quinia, grs. v., Dover's powder, grs. vij., every four hours.

10th.—The same. Continued treatment. Tongue thickly coated, but moist.

11th.—Ordered pil. hydrarg., grs. vij., at night. Liniment. Patient complains less, but still shrinks from pain; is at times delirious. I used beef-tea and egg punch freely.

16th.—Patient allows himself to be moved, although very sore and weak. As in the last case, the head inclines to the left shoulder, and symptoms every way resemble that case. Patient is of much stronger constitution, and was free from disease of any kind. Patient was discharged from hospital, Mar. 2d, convalescent.

Case IX. J. P., old soldier, from Providence, R. I., 17 years old, rather small and immature, but apparently healthy. Was admitted to hospital, February 10th, 1865, at the time comparatively helpless, with involuntary discharges from bowels and vomiting of bilious matter. Petechiæ were seen on the abdomen, with muscular contractions from head to heels. Delirious most of the time. Blisters were applied to neck and spine, hot stones to feet, and quinia sulph., grs. vij., capsicum, grs. ij., whiskey ℥ij., every three hours during the day. Dover's powder, grs. vij., morph. sulph., gr. ¼, at bedtime.

11th.—Muscles of neck very tense, and head so drawn back as to obstruct the œsophagus. This continued for three days, during which time injections of beef-tea and wine, each one pint, were given every three hours, nights excepted. On the fifth day from the attack, the muscles of the neck relaxed a trifle,

and patient could, with great effort, swallow a little; in doing which, copious discharges of dark, tenacious mucus were produced. From this date, patient continued to improve on stimulating diet alone.

March 1st.—Noticed swelling of parotid gland, attended with pain and loss of appetite, tongue coated, and feverish symptoms accompanying. I gave potass. chl. sol., freely painting the neck with tinct. iodine at night. A full month was embraced in subduing this attack, patient being able to walk by means of crutches.

May 1st.—Acute rheumatism set in, attended with swelling of joints and difficulty of breathing, probably the effects of sudden cold. No fever, no disturbance of bowels, no coating of the tongue, and yet patient could not be moved or touched without screaming. I gave sol. potass. iodidi during the day, and one-fourth of a grain of morphia at bedtime. Generous diet. At present time patient is able to sit up and stand, but not to walk. His chances seem good for recovery. I should have stated that deafness attended the first attack.

Case X. J. B. F., recruit, from Berkshire County, Mass., 18 years old, not a healthy person. Admitted February 18th, 1865, complaining of chills, weakness and slight headache. Gave oleum ricini, ℥ss. Afternoon.—Still complains of feeling cold. Gave quinia, gr. vij., capiscum, gr. ij., whiskey, ℥ij. and ordered a hot bath, which brought out spots on the face and body. Pulse barely perceptible; extremities very cold, and countenance anxious; mind perfectly clear. In all cases thus far the spots have been angular, of no particular shape, and generally from the size of a small bean to that of a chesnut. The prominent symptom in this case was the sensation of cold, as expressed by the patient's constantly stepping out of bed to go to the stove, which he did thirty minutes before he died, death taking place twelve hours from the attack. No opisthotonos, or pain, except in head, and no amount of heat made any impression upon the chilliness. The dilatation of the pupils was very great.

Case XI. C. I., recruit, from New Ipswich, N.H., 18 years old, robust, healthy, and every way sound. Was admitted February 23d, complaining of headache and complete blindness. Tongue coated, and stinging pains in arms and legs. Gave oleum ricini, ℥ss., ol. croton. tiglii. gtt. iij. Noticed spots on arms, legs, and face; also noticed redness of the eyes. In one hour's time the spots, which were more circular than angular, increased from the size of beans to large patches, running

together, especially on the forearms, growing very dark and sore to the touch. Pulse feeble; extremities cold, but patient expressed himself as feeling comfortable, if let alone.

24th.—Spots still very dark and swollen, showing a disposition to slough, having every appearance of sores from caustic potash.

25.—Line of demarkation very distinct, especially on the arms and wrist. On the 26th, skin sloughed out, leaving the whole inner surface of forearm down to fascia raw and excessively painful, suppurating freely. Spots on legs formed thick crusts, discharging matter from the under surface continually. From the commencement of the sloughing, patient improved slowly until near the first of April, when sore mouth and tongue set in, attended by profuse expectoration, similar to ptyalism. This subsided in a fortnight's time, and patient improved rapidly in every respect, excepting the eyesight, which only allowed him to discern objects independently of form.

May 11th.—Patient received his discharge from the U. S. service, which prevented any further observation of the case. There was no opisthotonos in this case, or cerebral disturbance. Secretions and evacuations every way natural and healthy.

Case XII. A. S. P., recruit, from Gardner, Me., 21 years old, very robust and healthy. Was brought to hospital early in the morning of March 20th, insensible, helpless, and very restless; head inclined backwards, but muscles not rigid; tongue badly coated and brown; face very red, and pulse high.

22d.—Eruption about the face, more particularly the mouth and nose; could discover no spots, nor did the patient seem sensible to pain. Patient would pass his water involuntarily, and most of the time was delerious. Symptoms continued bad from the commencement to the time of his death, April 8, 1865.

Case XIII. Dr. G. A. P., recruit, from Jaffrey, N.H., 40 years old, a practising physician, came to this post from Concord, N. H., having attended a case of spotted fever previous to coming here. Excessive pain in the head and limbs; prostration; purple spots on the abdomen, making their appearance on the third day from the first sensation of illness. Patient was admitted to hospital April 11th. Neck stiff, very sore to the touch and inclined to left side. No change in symptoms until April 13th, when the face, directly in front of right ear commenced to swell, and by night had increased up and down, from the temple to the clavicle, embracing the parotid gland, very hard and extensive, and not seemingly painful.

15th.—Pus commenced discharging from the ear, very freely. No fluctuation in the tumor.

17th.—An incision was made at the base of the tumor, also another on the day following, followed by free discharge. During the first two weeks patient seemed perfectly indifferent, would answer indirectly, with momentary consciousness. Patient continued to improve from the commencement of the discharge from the abscess. Most of the time had no control of rectum or bladder.

May 7th.—Was conveyed home convalescent.

Case XIV. J. R., recruit, from Boston, Mass., 38 years old, of delicate constitution, sailmaker by trade. Was admitted March 22d, with pains in whole body; felt so sore as not to bear his weight; cramped all over; inclined to be stupid. No spots perceptible, nor were there any other prominent symptoms. His breathing was stertorous previous to his death, which occurred March 30th, eight days from attack.

Case XV. A. W. F., recruit, from Bangor, Me., musician, 19 years old, stout and healthy. Symptoms as in previous cases. Was admitted April 3d. Pulse very high; neck stiff, and although sensible, could not speak; countenance troubled, and patient very restless. Sodæ bisulph. was given freely, and continued, with no perceptable effect.

4th.—Pulse 100; face flushed, and paralysis of left side.

5th.—Stertorous breathing, with livid countenance. Patient died in the afternoon. No spots or opisthotonos.

Case XVI. W. L., recruit, from Hopkinton, Mass., farmer, 19 years old, was at the time of attack in hospital for measles. Admitted March 6th.

10th, 4 P. M.—Spots came out all over the body; no headache; mind clear. In two hours the whole surface was nearly black, in which state patient died, complaining only of difficulty in breathing. Patient occupied the bed previously used by Case VIII. Whether the disease had any other than a peculiar turn and terminus of measles I cannot say; it certainly differed from anything I ever witnessed. The spots were isolated, and wholly independent of the rubeola.

Case XVII. W. M., recruit, from Roxbury, Mass., 19 years old, healthy. Was admitted March 7th. Died March 10th, having symptoms like the previous cases. Petechiæ on abdomen. No opisthotonos.

Other cases of a mild character have occurred, but hardly deserving mention. I would remark that in all cases, mild or exaggerated, erysipelatous eruptions have occurred on the third or fourth day from attack; and in all cases where the patient was conscious, soreness of the limbs and feet has prevailed, and

in most cases involuntary discharges from the rectum and bladder. In but two instances could anything like contagion be traced.

ANALYSIS OF CASES.

	Amitted.	*Died.*	
1. L. B. L.	Sept. 14th, 1864.	Sept. 19th.	
2. C. B.	Jan. 25th, 1865.	Jan. 27th.	
3. E. D.	" 29th, "	" 31st.	
4. O. W.	" " "	" 29th.	
5. L. C.	Feb. 6th, "	Feb. 7th.	
6. O. B.	" 8th, "		Recovered.
7. B. F. W.	" 9th, "	" 11th.	
8. J. P.	" 10th, "		Recovered.
9. A. A. M.	" " "	" 10th.	
10. E. F.	" 14th, "	" 15th.	
11. J. E. S.	" 15th, "	March 17th.	
12. J. B. F.	" 18th, "	Feb. 18th.	
13. W. L.	March 6th, "	March 10th.	
13. W. M.	" 7th, "	" "	
15. A. S. P.	" 20th, "	April 8th.	
16. J. R.	" 22d, "	March 30th.	
17. J. F. P.	" 29th, "	April 16th.	
18. A. W. F.	April 3d, "	" 5th.	
19. G. A. P.	" 11th, "		Recovered.

THE FOOD AND THE TEETH.—Observations on the Inorganic Constituente of the Food of Children, as connected with the Decay of the Teeth, and the Physical Constitution of Women in America.

By the late JAMES PAUL, M.D., of Trenton, N.J.

[The following very valuable and instructive paper was read before the District Medical Society, for the County of Mercer, N.J., some years ago, by the late James Paul, M.D., of Trenton. There is so much in it worthy the consideration of the profession and the public, that we deem it of sufficient importance to reproduce it.—*Ed. Med. and Sur. Rep.*]

The subject to which I have the pleasure of directing your attention is, not only in a physiological point of view, one of interest, but in its application to the preservation of health—the tendency to improve the general condition and physical constitution of the human family inhabiting this great continent—a continent abounding, as it does, in all the productions which a bountiful Creator, in his beneficience, bestows on man—cannot be otherwise than of great and paramount importance.

At a period somewhat now remote, the celebrated naturalist,

Buffon, alluding to the animals of this continent, advanced the following opinions:—

1st. That the animals common both to the Old and New Worlds are smaller in the latter.

2d. That those belonging to the New are on a smaller scale.

3d. That those which have been domesticated in both, have degenerated in America.

4th. That, on the whole, it exhibits fewer species.

These opinions, Mr. Jefferson, in his "Notes on Virginia," undertook, and it is generally considered successfully, to controvert; yet, however repugnant to the general idea the opinion as to the tendency of those animals which have been domesticated in America from other countries to degenerate, it is an undeniable and much to be regretted fact, that the human family, and more particularly the female portion of that family, have declined in the vigor and strength of their physical constitution.

I wish not to be misunderstood: I say it is a melancholy fact, too well known to the observant physiologist, that increase of strength, and development of frame, have not been attained by the intermarrying of members of the human family of different nations on this continent; but the reverse is too observable; the physical frame of the female sex has degenerated—calling loudly for the aid of science to arrest an evil of so much magnitude.

Let us for a moment contemplate the female form, as seen on this broad continent. In no country in the world are children more fair and beautiful; and as the young girl grows up to womanhood, we see in her a full realization of that being forming in the hands of Divinity, portrayed by the poet, as seen by Adam in his dream:—

> "Under his forming hands, a creature grew,
> Manlike, but different sex; so lovely fair,
> That what seemed fair in all the world, seemed now
> Mean, or in her summed up, in her contained,
> And in her looks;"—

We see this young and lovely being—the forehead well developed—the countenance, rather elongated, relieved of the harsher outline of some of the European nations—with fragile form, and small, yet well-developed bust, fliting for a few short years among us, and then—yes, then there comes a change. Ere five and twenty summers pass, this flower begins to fade—the rounded form shrinks—the bloom of health decays; and if she escapes the fell destroying angel's death-like grasp, a wreck of former self remains.

Why should this be so? The robust of other countries come to this continent—they live in comfort—their food is excellent in quality—their progeny is like themselves—but even now, in the very first generation, does the degenerating process make itself manifest—the teeth begin to decay; and girls, while yet children, have to visit the dentist to have them cleansed, scraped, and plugged.

Now this brings us at once to the head and front of our subject; and if we can point out the first cause of this decay of what should be as strong as adamant, it may be the means in helping us in our investigation. That there is something radically wrong in our system of rearing the young, to which this misfortune is in a great measure owing, I am free to confess, is my firm opinion. I would indeed it were in my power, in pointing out the evil, to be as successful in detailing the cause, that we may apply the remedy. Still, although perhaps unable to accomplish all I wish, my observations may not be without their weight, and induce others, more observant, more scientific, and more competent to the task, to follow up an investigation so fraught with advantage to our fellow-beings.

It is certainly to be deplored that the females of this continent, descendents of European parents, should be so much afflicted with caries of the teeth—the decay of parts formed of substances which enter into the composition of some of our hardest minerals—marble, bone-earth and fluorspar; and this decay unfortunately occurs in early life—in girls yet at school; and many a young woman, ere she has attained a marriageable age, has had to replace the natural with the unnatural, though more enduring enamel of the artist's formation. This ought not to be: God made all mankind alike; in no portion of the earth are nations found who lose their hands, or feet, or tongue, er eyes; and there can be no cause why the inhabitants of this land should loose their teeth. It is not so in the olden countries from whence the progenitors of the present race have come; nor is it so in the West India Islands, which may almost be considered as part of this great continent. So excellent is the structure of the teeth of savage nations, that some tribes in Africa, I think the Mocoes and Mundingoes, file all the front teeth, so that they shall be separated and form sharp points, the better to tear the uncooked animal food.

One cause of this affliction is, in the mind of many, attributed to the great and sudden changes of temperature experienced on this continent—the thermometer rising and falling 20, 30, and even 40 degrees in twelve hours. But if attributable to these

sudden changes, we know that sudden expansion by means of heat, or sudden contraction by means of cold, causing the particles of which bodies are composed to tear themselves asunder; consequently to crack, break, and fall in pieces. But this is not the case with the teeth of our females; a caries or decay commences most generally in the side of the tooth, extending to the enamel, which is sometimes involved in the destruction; at other times, it is left a crust or shell to snap and break off in small pieces, when unable to resist the pressure of whatever may be placed against it; besides, the teeth are for the most part sheltered from these sudden changes, and kept at a temperature nearly amounting to blood-heat at all seasons. I do not think we can place the general destruction of the teeth, and consequent affliction of the females of America to this cause. I fear we must rather look for it to constitutional weakness, and this constitutional weakness to a deficiency of the inorganic or earthy constituents being taken into the system, more particularly at an early period of life.

If I am correct in this opinion, and reason, philosophy, and a thorough examination of physiological facts in both the animal and vegetable economy, tend far to bear out these views, then if we would try and correct this lamentable state of things, let us commence at the very beginning, and make ourselves acquainted by examining the structure and composition of the teeth, and then we shall be more able to understand what is required to aid nature in their formation and consequent preservation.

First, then, let us make ourselves acquainted with the structure and composition of the teeth. The teeth are nearly allied to bone in structure; both having earthy deposits, intermixed with fibres and cells of gelatine, which, by consolidation, gives form and strength—in the case of bone, to bear the weight of the various parts, and afford protection to the different organs of the body; and in the case of teeth, to cut and grind the food required for the formation, support, and reparation of its various parts.

Now, teeth are composed of three different substances, and these three are disposed according to the purposes required of them; they are, *cementum* or *crusta petrosa*, *dentine* (known as ivory in the tusk of the elephant), and *enamel*. The *cementum* or *crusta petrosa*, corresponds in all especial particulars with bone; possessing its characteristic *lucunæ* or small cavities, and being traversed by vascular and medulary canals, whenever it occurs of sufficient thickness; it is the first cover-

ing of the young teeth, and may be said to invest the fang of the tooth which enters the aveolar process of the jaw. The *dentine*, or ivory, consists of a firmer substance, in which inorganic or mineral matter predominates, though to a less degree than *enamel*. It is traversed by a vast number of very fine cylindrical, branching wavy tubuli, which commence at the pulpy cavity, and radiate toward the surface. The diameter of these tubuli, at their largest part, average about one 10,000th of an inch: their smallest are immeasurably fine; so much so that they cannot possibly receive blood, but it is surmised that, like the canaliculi of bone, they imbibe fluid from the vascular lining of the pulp-cavity, which aids in the nutrition of the tooth. The *enamel* is composed of solid prisms of fibres, about the one 5,600th of an inch in diameter, arranged side by side, and closely adherent to each other; their length corresponds with the thickness of the layer which they form; and the two surfaces of this layer present the ends of the prism, which are usually more or less hexagonal. In the perfect state, the enamel contains but an extremely minute quantity of animal matter. In the centre of the tooth is the soft pulpy cavity, which affords a bed for the bloodvessels and nerves which supply it with life and sensibility.

I shall not enter more minutely into the structure of the teeth, but may briefly state, that like all other structures of the animal body, the component parts are derived and deposited from the blood, by that mysterious and incomprehensible power that selects and deposits the necessary constituents in the formation of the several portions, according to the use required.

Now, in the composition of the teeth, we have first the division into organic and inorganic or earthy matter; and we find that the several substances which enter into the structure of the teeth, differ chiefly as to the earthy matter contained in each.

Chemical analysis of the incisors, or front teeth of man, show that they contain in one hundred parts of each, as follows:—

	Cementum.	Dentine.	Enamel.
Organic Matter----------	29.27	28.70	3.59
Earthy Matter----------	70.73	71.30	96.41
	100.	100.	100.

These proportions will occasionally differ; in some individuals the organic constituents having less than here stated, amounting in the dentine only to 21. The analysis of bone, however, gives a much larger proportion, viz.:—

Organic matter	32.56
Earthy matter	67.44
	100.

Let us now take a more complete analysis, showing what earthy constituents enter into their composition. Analysis of the molar or grinding teeth of man, and of the bones of the arm and leg of a man of forty, show the following proportions:

	Dentine.	Enamel.	Bone.
Inorganic Matter:—			
Phosphate of Lime with traces of Fluate of Lime	66.72	89.82	54.61
Carbonate of Lime	3.36	4.37	9.41
Phosphate of Magnesia	1.08	1.34	1.07
Salts, etc.	.83	.88	2.35
Organic Matter	28.01	3.59	32.56
	100.	100.	100.

Thus we see the very great proportion of certain earths that enter into the structure of the teeth and bone of man, the chief substance being the phosphate of lime, familiarly known as bone earth. We find, too, that whereas in ordinary bone the phosphate of lime constitutes only 54 parts in 100, in the enamel of the teeth it is nearly 90 parts in 100—while the carbonate of lime in bone amounts to 9.41, in the enamel of teeth it is only 4.37; the enamel being literally almost a mineral in substance, having only 3.59 parts of animal matter in 100.

Thus the teeth to be strong and durable, require a large quantity of earthy ingredients, particularly *lime*, to enter into their composition. Let us inquire whence it is derived; and for this we must examine the blood.

To allow of such deposits from the blood, it is first necessary that they should be held in solution in that fluid. You are no doubt aware that the blood circulates to every portion of the body by the action of the heart, which forces a certain quantity, say 2 oz. at every contraction, into the aorta or great canal leading from the left ventricle—that the aorta divides and subdivides into innumerable branches, which are made to ramify to every part of the body, until the extreme branches end in capillary tubes or vessels, the calibre of which is so small as not to allow the red globules or corpuscles of the blood to enter them, but which allows the serous portion to traverse every part of the organized structure, holding in solution all those constitu-

ents necessary and requisite for the formation and reparation of its several parts.

In the serous portion of the blood, then, we find contained the constituents required for the composition of bone and teeth —analysis of 1000 parts of healthy human blood giving, according to M. Lecanu, the following proportions:—

Water	780.15	785.58
Fibrine	2.10	3.57
Albumen	65.09	69.41
Coloring matter	133.00	119.63
Crystalizable fat	2.43	4.30
Fluid fat	1.31	2.27
Extractive matter, uncertain	1.79	1.92
Albumen in combination with Soda	1.26	2.01
Chlorides of Sodium and Potassium; Carbonates, Phosphates, and Sulphates of Potash and Soda	8.37	7.30
Carbonates of Lime and Magnesia; Phosphates of Lime, Magnesia, and Iron; Peroxide of Iron	2.10	1.42
Loss	2.40	2.50
	1000.	1000.

We see by this table, if we subtract or take away the proportion of water amounting to 780 parts, and the coloring matter amounting to 133, we shall leave scarcely 90 parts of organic and earthy material, the salts and earths forming upwards of a 10th—the salts being in proportion to the earths as 4 to 1.

Having then shown the constituent portions of the bones and teeth to be in the blood, the next consideration is, whence are they derived?

Before entering on this subject further, let us for a moment take a broader and more comprehensive view of what must be most interesting to mothers, and of great consequence to the well-being of the infant generation, in a short time, in a very few years, to become in their turn the mothers and fathers of another generation.

The question then presents itself, what is the nourishment or food best adapted and necessary to the wants of an infant, that the foundation may be laid for a strong frame and vigorous constitution? For here, we must recollect, is the starting point in by far the majority of instances. We know that in some cases disease is hereditary—that the offspring unfortunately inherits from the parents constitutional defects; but we also know

that more misery, suffering, and constitutional derangement, are entailed on children by want of care, and improper food in the first years of life, by which their hopes of health are blasted, and they are doomed to struggle through a weary life, to be hurried at last into a premature grave.

Now, that the frame—that is, the bones, muscles, and other portions of the infant—may be fully developed, it is necessary that it should be supplied with nourishment, containing all the constituents required for this important undertaking. And this nourishment, by the all-wise ordering of Providence, is contained in the milk secreted from the mother's bosom.

The infant is entirely dependent on the nourishment derived from its mother, and nature has wisely ordained that the secretion from the mother is its very best food; for we find in the composition of milk—that is, healthy milk, derived from healthy blood—all those ingredients we have hitherto traced as requisite in the formation of the bones and teeth, and not only these, but every constituent required for the life and growth of the individual;—milk containing the albuminous, saccharine, oleaginous, saline, and earthy componds requisite and necessary for the health, strength, and development of the infant child.

How thankful ought we to be to the all-wise and bountiful Giver of all good, for this beneficient, this wonderful provision in nature, by which there shall be secreted from the mother, a fluid so important, having properties blended in intimate connection, to afford the requisite substances for the support, growth, and development of her offspring.

An analysis of cow's milk gives the following proportions of the various constituents; that of human milk is not so elaborate, but contains the average of observations taken at fourteen different times from the same individual, by Simon.

Cow's milk by M. Haidlen.

Water	873.00
Butter	30.00
Caseine	48.20
Milk Sugar	43.90
Phosphate of Lime	2.31
Phosphate of Magnesia	.42
Phosphate of Iron	.07
Chloride of Potassium	1.44
Chloride of Sodium	.24
Soda in connection with Caesine	.42
	1000.

Woman's milk by Simon.

Water	883.6
Butter	25.3
Caesine	34.3
Milk, Sugar, and Extractive Matter	48.2
Fixed Salts	2.3
	1000.

	Maxium of 14 observations.	Minium of 14 observations.
Butter	54.0	8.0
Caseine	45.2	10.6
Sugar and Extractive Matter	62.4	39.2
Salts	2.7	1.6

Now, although these amounts will no doubt vary, under every variety of circumstances, according to the *health*, *exercise*, *passions* and *food* of the mother, yet they show what I particularly wish to impress on your minds, that healthy milk contains all the requisites for the nourishment of the infant—but then it must be *healthy* milk, secreted from healthy blood, and that blood must derive these ingredients from the *food* consumed, otherwise they will be taken up from the structures of the body, and hence the havoc made in nursing females when a due allowance of proper aliment is withheld, and the shrunken body of the famished mother is drained to the last drop, to supply the cravings of the death-like and impoverished offspring.

I have said that the composition of milk in quality and quantity, will vary and depend on circumstances. Now, the mental state exerts a surprising influence on this secretion, and much more than is usually supposed. It may not be irrelevant to mention a few of the cases recorded in our journals,* of the influence of strong mental excitement on this secretion.

"A carpenter fell into a quarrel with a soldier billeted in his house, and was set upon by the latter with his drawn sword. The wife of the carpenter, at first, trembled from fear and terror, and then suddenly threw herself furiously between the combatants, wrested the sword from the soldier's hand, broke it in pieces, and threw it away. During the tumult, some neighbors came in and separated the men. While in this state of strong excitement, the mother took up her child from the cradle, where it lay playing, and in the most perfect health, never having had a moment's illness; she gave it the breast, and, in

* From Carpenter's Physiology.

so doing, sealed its fate. In a few minutes the infant left off sucking, became restless, panted, and sank dead upon its mother's bosom. The physician, who was instantly called in, found the child lying in the cradle, as if asleep, and with its features undisturbed; but all his resources were fruitless. It was irrevocably gone."

"A lady having several children, of which none had manifested any particular tendency to cerebral disease, and of which the youngest was a healthy infant a few months old, heard of the death of the infant child of a friend residing at a distance, with whom she had been on terms of close intimacy, and whose family had increased cotemporaneously with her own. The circumstance naturally made a strong impression on her mind, and she dwelt upon it the more, perhaps, as she happened at that period to be separated from the rest of her family, and to be much alone with her babe. One morning shortly after having nursed it, she laid it in its cradle, asleep and apparently in perfect health; her attention was shortly attracted to it by a noise, and on going to the cradle, she found her infant in a convulsion, which lasted for a few minutes, and left it dead."

"A mother had lost several children in early infancy from a convulsive disorder. One infant, however, survived the usual fatal period; but whilst nursing him one morning, she had been strongly dwelling on the fear of losing him also, although he appeared a very healthy child. In a few minutes after the infant had been transferred into the arms of the nurse, and while she was urging her mistress to take a more cheerful view, directing her attention to his thriving appearance, he was seized with a convulsion-fit, and died almost instantly."

These are interesting cases, and tend to show the great influence the mental affections exert on the secretion of milk, in rendering it deleterious in quality, and unwholesome to the infant.

Returning then to our subject, you will observe by the analysis, that cow's milk differs from that of woman in the proportions of some of the constituents, that it abounds more in butter, but particularly in caseine or cheese; and on the other hand, that human milk abounds more in the saccharine principle, or sugar of milk. Now, this points out a circumstance from which great benefit may be derived. It is of very frequent occurrence that infants are deprived of the natural nourishment of the mother, and diverse opinions are given relative to the food of infants by persons who really know very little about the matter; one recommends a milk diet, another that the infant must be fed on starch and sugar.

Now, to enable the infant to receive a nourishment in every respect similar to the mother, the knowledge of the various proportions which we obtain by chemical analysis, enables us to rectify and produce milk very analogous to human milk from that of the cow, by diluting it with water, in the proportion of about half as much again; that is, to a pint of milk should be added half a pint of water that has been boiled, which will reduce the cheese principle to the proper proportion; add a small portion of cream to restore the proportion of butter, and then add sugar until the whole is distinctly sweetened, and we have a compound, in every respect, similar to the milk from the human breast.

To understand the subject of nutrition, allow me to explain to you, that food should, or must embody two great principles, one to nourish, the other to give heat to the body. And food, when consumed, is applied to one or the other of these purposes. Now, in the process of digestion, the constituents of the food are separated, and arranged in three classes.

1st. All that portion derived from animal food, eggs, the curd of milk, the gluten or adhesive portion of wheat and other grain, and whatever in animal or vegetable food can be rendered into *albumen*—of which the best example that can be offered in illustration is the *white of egg*, which is, in reality, nearly pure albumen—and the principle is, therefore, called *albuminous*.

2d. All that portion of the food derived from vegetables, starch, sugar, etc., that can be converted into *sugar* in the process of digestion. This principle is, therefore, called *saccharine*.

3d. All the fat, butter, oil, etc., which, when deprived of the other substances is left in the state of *oil*, and, therefore, called *oleaginous*.

Now, of these three, the *albuminous* is the *nutrient*, and the *saccharine* and *oleaginous* the *calorifacient*, or heat giving; and chemical analyses show that they vary in composition.

	ALBUMEN.		OLEAGINOUS.
	Eggs.	Wheat.	Mutton Fat.
Carbon	55,000	55.01	78,996
Hydrogen	7,073	7.23	11,700
Nitrogen	15,920	15.92	
Oxygen, Sulphur, Phosphorus	22,007	21.84	9,304

	SACCHARINE.			
	Starch, Arrow Root.	Sugar from Starch.	Sugar of Milk.	Cane Sugar.
Carbon	44.10	37.29	40.00	42.301
Hydrogen	6.18	6.84	6.61	6.384
Oxygen	49.42	55.87	52.93	51.315

[*Continued in the next No.*]

Editorial.

MEDICAL COLLEGES.—The general introductory lecture to the annual course of instruction in the Chicago Medical College, Medical Department of Lake Forest University, was given in the lecture-room of the College on the evening of the 2d inst. The exercises were opened with prayer by the Rev. J. H. VINCENT, and the introductory lecture delivered by J. H. HOLLISTER, M.D., Professor of Physiology and Histology. The lecture was elegantly written, and in sentiment well calculated to interest and profit those to whom it was addressed.

The number of students in attendance at the opening of the term is, at least, one-third larger than in any previous year; and the prospects are good for full courses of instruction in every department of medical science and art.

The chemical laboratory is well-furnished; several important additions have been made to the museum, more especially for the purpose of illustrating the courses on anatomy, physiology, microscopy, and surgery: and the wards of Mercy Hospital are crowded with patients, furnishing an ample field for clinical instruction. The full five months' lecture-term, with a supplementary summer reading and clinical-term of four months; the arrangement for enabling the student to make his courses progressive instead of repetitional; and the full daily course of true clinical instruction in medicine aud surgery, are advantages

that are rapidly becoming known and appreciated by the profession.

The general introductory lecture in the Rush Medical College was given on Wednesday evening, the 4th inst., by Prof. J. V. Z. BLANEY, who having terminated his service in the medical department of the army, resumes the duties of Professor of Chemistry, as formerly. His lecture was well written and well received by the class.

The number of students in attendance was large, and the College represented to be in a prosperous condition. Its greatest defects are the shortness of the lecture-term, and the very limited advantages for clinical instruction. For though the Professors of Surgery and Practical Medicine have each appended to their titles that of "Clinical Professor," yet neither has a place in any hospital in the city, or any means for clinical instruction, except the simple college dispensary.

MEDICAL COLLEGES IN CINCINNATI.—Since the death of Dr. A. H. BAKER, the faculty of the Cincinnati College of Medicine and Surgery has been reorganized, with Dr. WOOD in the Chair of Surgery.

The Miami Medical College has abolished lectures altogether, and in their place demand simply a matriculation fee of $15.

Berkshire Medical College.—Dr. HORATIO R. STORER, of Boston, has been appointed to the Chair of Obstetrics in this institution.

EXPLANATION.—The article on "Beebread as a Diuretic," in the September number of the EXAMINER, and the one on "Forcible Dilatation of Strictures of the Urethra," in the present number, were written in 1859, and sent to me about the time that I transferred the *Chicago Medical Journal* to Dr. D. BRAINARD. They were accidentally placed among some papers where they were not discovered again until a few weeks since. We have chosen to give them publicity at this late period, because the subjects to which they relate are still of practical interest to the profession. That relating to strictures has no

name attached to it, but it was doubtless written by Dr. EDWIN POWELL, of this city, who was, at that time, one of the surgeons to the Mercy Hospital.

THE MORTATITY STATISTICS FOR AUGUST.—The Mortality report of the City of Chicago, for the month ending Aug. 31, has been prepared by the health officer, T. B. Bridges. The entire number of deaths was 464, being a decrease of 35 over the corresponding month of last year, notwithstanding the great increase in the population.

DISEASES.

Apoplexy,	2	Inflammation of Lungs,	7
Accident,	15	Inflammation of Stomach,	1
Brain Fever,	5	Jaundice,	1
Bilious Fever,	2	Liver Complaint,	1
Burned,	1	Lung Fever,	3
Congestion of Brain,	4	Measles,	1
Congestion of Lungs,	2	Marasmus,	4
Congestion of Liver,	1	Nervous Fever,	3
Congestive Chills,	1	Old Age,	7
Cholera Morbus,	3	Paralysis,	1
Cholera Infantum,	14	Sunstroke,	1
Cold,	1	Scalded,	1
Cancer,	1	Shot by Police,	2
Consumption,	31	Suppressed Menstruation	1
Cramps,	12	Suicide,	3
Croup,	8	Spotted Fever,	1
Childbirth,	2	Scarlet Fever,	11
Convulsions,	5	Summer Complaint,	114
Drowned,	6	Stillborn,	12
Diphtheria,	9	Spasms,	2
Dropsy,	11	Small-Pox,	1
Dysentery,	25	Teething,	22
Diarrhœa,	22	Typhoid Fever,	13
Heart Disease,	3	Unknown,	39
Hemorrhage,	3	Whooping Cough,	3
Intermittent Fever,	2		
Inflammation of Brain,	1	Total,	464
Inflammation of Bowels,	8		

AGES OF THE DECEASED. — Under 5 years, 312; over 5 and under 10 years, 12; over 10 and under 20, 25; over 20 and under 30, 32; over 30 and under 40 42; over 40 and under 50, 17; over 50 and under 60, 9; over 60 and under 70 6; over 70 and under 80, 5; unknown, 4. Total, 464.

NATIVITIES.

Chicago,	289	England,	4	Sweden,	3
Other States,	53	Germany,	32	Wales,	2
At Sea,	1	Ireland,	48	Unknown,	10
Bohemia,	3	Italy,	1		
Canada,	7	Norway,	7	Total,	464
Denmark,	3	Scotland,	1		

DIVISIONS OF THE CITY.

North, ...127 | South, ...139 | West, ...198 | Total, ... 464

Appended is the official mortality report for the month of September, 1865, as taken from the records of the health officer. It will be seen that the statistics, as compared with the month preceding, show a large decrease of the number of deaths, due, perhaps, mainly to the cooler weather experienced during the latter part of the month. But a feature not less gratifying is the fact that, with a population largely increased over that of 1864, the deaths for September of this year show a falling off of 48, as compared with the same month last year. This is doubtless to be attributed in large measure to a better system of sanitary precautions, and to the fact that some miles of sloughs and filthy streets have within the past year been covered from sight and smell with the pavements which have been put down in various sections:—

DISEASES.

Apoplexy,	1	Inflammation of Lungs,	2
Accidents,	11	Intemperance,	2
Brain Fever,	4	Jaundice,	1
Billious Fever,	6	Liver Complaint,	1
Congestion of Brain,	3	Lockjaw,	1
Cholera Morbus,	6	Nervous Fever,	3
Cholera Infantum,	4	Old Age,	7
Cancer,	1	Sunstroke,	1
Cerebro-Spinal Meningitis,	1	Ship Fever,	1
Consumption,	31	Scarlet Fever,	12
Cramps,	18	Summer Complaint,	54
Croup,	14	Stillborn,	6
Childbirth,	5	Spasms,	1
Convulsions,	13	Small-Pox,	1
Drowned,	4	Teething,	16
Diphtheria,	11	Typhoid Fever,	14
Dropsy,	11	Typhus, "	2
Dysentery,	19	Tabes Mesenterica,	1
Diarrhœa,	9	Whooping Cough,	2
Heart Disease,	2	Worms,	1
Intermittent Fever,	5	Unknown,	31
Inflammation of Brain,	3		
" " Bowels,	4	Total,	346

Ages of the Deceased.—Under 5 years, 189; over 5 and under 10 years 24; over 10 and under 20, 12; over 20, and under 30, 28; over 30 and under 40, 40; over 40 and under 50, 17; over 50 and under 60, 14; over 60 and under 70, 12; over 70 and under 80, 6; over 80 and under 90, 1; unknown, 3. Total, 346.

NATIVITIES,

Chicago,	193	England,	4	Sweden,	9
Other States,	41	Germany,	38	Wales,	1
Bohemia,	3	Ireland,	40	Unknown,	4
Canada,	2	Norway,	6		
Denmark,	2	Scotland,	3	Total,	346

DIVISIONS OF THE CITY.

North, 94 | South, 98 | West, 154 | Total, 346

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